

REMARKS

The present Amendment is in response to the Examiner's Office Action mailed March 16, 2006. Claims 11-20 are cancelled and new claims 21-33 are added. Claims 1-10 and 21-33 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

I. PRIOR ART REJECTIONS

A. Rejection Under 35 U.S.C. § 103

The Examiner rejects claims 1-10 under 35 U.S.C. § 103 as being unpatentable over *Di Vita et al.* (U.S. Patent No. 4,703,488) in view of *Peterson* (U.S. Patent No. 6,055,815). The Applicants respectfully traverse the rejection of claims 1-10 because the proposed combination does not each or suggest each and every elements of the claims.

According to the applicable statute, a claimed invention is unpatentable for obviousness if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (2005); *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966); MPEP 2142. Obviousness is a legal question based on underlying factual determinations including: (1) the scope and content of the prior art, including what that prior art teaches explicitly and inherently; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17-18; *In*

re Dembiczak, 175 F.3d 994, 998 (Fed. Cir. 1999). It is the initial burden of the PTO to demonstrate a *prima facie* case of obviousness, which requires the PTO to show that the relied upon references teach or suggest all of the limitations of the claims. MPEP 2142 (emphasis added).

According to MPEP section 2143:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaech*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

(Emphasis added).

Regarding claim 1, according to the Examiner on page 2, "Di Vita discloses in Fig. 2 a microelectomechancial system for controlling the temperature of a heat generating component which is a laser diode, comprising a magnetic heat sink device (col. 4, lines 13-18)...."

However, in direct contrast to the Examiner's characterization, *Di Vita* merely teaches application of a magnetic field to a semiconductor laser to confine charge carriers within a central portion of an active region. Col. 2, lines 38- 48; col. 2, lines 62-66; and col. 4, lines 14-17. Thus, the magnetic field of *Di Vita* is applied for current confinement not for temperature control as asserted in the Office Action. In fact, the laser device in *Di Vita* is soldered to a heatsink not allowing for electro-mechanical temperature control but rather for merely producing a magnetic field to confine current. Thus, the combination set forth does not teach or suggest each and every element of independent claim 1 and the Applicants request that the rejection of claim 1 be withdrawn.

Claims 2-5 depend from claim 1. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071 (Fed. Cir.

1988). Therefore, the Applicants request that the rejections of claims 2-5 be withdrawn at least for the same reasons as claim 1.

Regarding the rejections of claims 6-8, the Examiner has failed to set forth a *prima facie* case of obviousness. According to the Examiner on page 3 of the Office Action, “[w]ith respect to claims 6-8, since Di Vita and Peterson disclose the product, it is inherent product by process.” Claims 6-8 recite process elements, not structure elements, and therefore, are not product-by-process elements. *See* 35 U.S.C. § 101 (1994) (“Whoever invents or discovers any new and useful process . . . may obtain a patent therefor.”) (emphasis added); and 35 U.S.C. § 100(b) (1994) (“The term ‘process’ means process, art or method . . .”). “[I]t is generally the rule that patentability of a method claim must rest on the method steps recited, not on the structure used, unless that structure affects the method steps.” *Leesona Corp. v. US*, 530 F.2d 896, 908 (US Ct Clms 1976) (emphasis added). The elements of claims 6-8 cannot be simply disregarded, but rather, must be independently addressed by the Office in order to set forth a *prima facie* case of obviousness. Therefore, a *prima facie* case of obviousness has not been set forth and the Applicants request that the rejection of claims 6-8 be withdrawn.

Claims 9 and 10 depend from claim 6 and the elements of claim 6 are included within claims 9 and 10. Therefore, the Examiner must address the elements of claim 6 in order to provide a *prima facie* case of obviousness with regard to claims 9 and 10. Therefore, at least for the same reasons set forth above with regard to claim 6, the rejections of claims 9 and 10 should be withdrawn..

The Applicants also traverse the motivation for the proposed combination set forth in the Office Action. According to the Examiner on page 3 of the Office Action, it “would have been obvious to . . . provide a temperature sensor and control circuit receiving feedback from the heat sink to determine the actual temperature the laser diode to provide the control current or voltage to the laser diode then stabilize the optical wavelength of the light output from the laser by providing the constant temperature as taught by *Peterson* (col. 8, line 40-57).” As discussed above, however, *Di Vita* relates to current confinement, not to temperature control. Thus, the Applicant respectfully disagrees that one would be motivated to include a temperature sensor and control circuit in *Di Vita* as in view of *Peterson* when *Di Vita* merely relates to current confinement. As such, and in addition to the missing elements discussed above, sufficient

motivation to combine *Di Vita* with *Peterson* has not been set forth and the rejection of claims 1-10 should be withdrawn.

II. NEW CLAIMS

New Claims 21-31 have been added and are allowable at least for the same reasons as claim 1 from which they depend.

CONCLUSION

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 16 day of August, 2006.

Respectfully submitted,

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